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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/487,287	01/19/2000	Andrea De Toffol	8907-9021	2986

7590 12/19/2003

ARENT FOX KINTNER PLOTKIN & KAHN PLLC
1050 Connecticut Avenue N.W. Suite 400
Washington, DC 20036-5339

EXAMINER	
FERGUSON, LAWRENCE D	
ART UNIT	PAPER NUMBER
1774	

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/487,287	DE TOFFOL ET AL.	
	Examiner	Art Unit	
	Lawrence D Ferguson	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment mailed October 16, 2003. Claim 17 was added rendering claims 1-17 pending.

Claim Rejections – 35 USC § 103(a)

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-14 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashima et al. (U.S. 5,442,523) in view of EP 0724181.

4. Kashima discloses a backlighting device for use with display panels that has a light conducting plate and a light source provided in proximity to the end portion of one or both sides of the light conducting plate (column 2, lines 16-20) where backlight devices of displays are analogous to luminous signs. The panel of Kashima can be made by molding or casting (column 6, lines 48-49) having light diffusing capability and all surfaces of the light conducting plate being covered with a light reflecting plate or film except at least the end portion of the side and on the exit face (column 2, lines 20-26). The reference discloses single lamp edge lighting, dual lamp edge lighting and edge lighting (column 2, lines 30-48) comprising barium sulfate (column 3, lines 9-10) which

can be added to the conducting layer with light diffusing areas (column 3, lines 5-10 and 32). Kashima discloses the light conducting plate made of polymethyl methacrylate PMMA having a thickness of 2mm (column 7, lines 64-66) and which are used as the thermoplastic layer with a commercial polycarbonate sheet 360μm thick (column 10, line 33) where polycarbonate is known to be a thermoplastic material. Figure 1(a) shows a composite panel having more than one edge that is used to light the referenced invention and Figure 3(a) shows a light transmissive sheet (7) and a light diffusing plate (3) attached to the sheet. Kashima discloses the method of shaping the sheets including molding and casting (column 6, lines 46-49). Kashima further discloses the light conducting plate has a thickness of 3mm (column 10, lines 42-47). A panel wherein the composite is prepared by coextrusion of the base sheet of thermoplastic polymer and of the diffusing layer of thermoplastic polymer or by compression molding of the thermoplastic polymer layer containing barium sulfate obtained by extrusion or casting is a product by process limitation. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966. The base sheet of Kashima is capable of containing particles of substances diffusing light, both of polymeric and inorganic type. Kashima does not explicitly disclose the composite area being greater than 600 cm2. It would have been obvious to the average artisan for the

area to be as instantly claimed since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237. Kashima does not disclose the diffusing light layer thickness, or amount by weight or particle size of barium sulfate.

EP '181 teaches a composite panel with a light reflective sheet in a back light unit under a transparent light guide plate with improved luminance (abstract) with a light diffusing sheet (page 4, line 17) having an average particle size of the inorganic filler of 0.1 to 7 μm and is in the range of 100 to 300 parts by weight, where the inorganic filler is barium sulfate (page 6, lines 20-31) and the amount of additive is 0.01 to 5 parts by weight (page 6, lines 50-51). EP '181 teaches the light diffusion sheet having a thickness of 113 um (page 11, lines 14 and 54-55). Kashima and EP '181 are analogous art because they are from the same field of backlighting devices. It would have been obvious to one of ordinary skill in the art to include the thickness of the light diffusing layer, the amount by weight and average particle size of barium sulfate in the composite panel of Kashima because EP '181 teaches the sizes are conventional within the art. Further, the thickness, amount used and particle size each directly affect how much light is being diffused. Therefore each of these features are optimizable. One of ordinary skill would understand how to adjust the amounts and particle size of barium sulfate based on the amount of light desired to be diffused (See In re Aller 105 USPQ 233 and In re Boesch 205 USPQ 215).

5. Claim 15 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's remarks regarding rejection made under 35 U.S.C. 103(a) as being unpatentable over Kashima et al. (U.S. 5,442,523) in view of EP 0724181 have been considered but have been found unpersuasive. Applicant argues the Kashima et al. light conducting plate does not contain any barium sulphate. Examiner respectfully disagrees because Figure 3(b) shows a light conducting plate (1) comprising a light diffusing layer (3) comprising light diffusing material (6), which contains barium sulfate as disclosed in column 3, lines 1-12. Instant claim 1, discloses a diffusing light layer placed on one or both surfaces of the base layer constituted by thermoplastic material containing barium sulphate. Kashima discloses a backlighting device for use with display panels that has a light conducting plate (column 2, lines 16-20) having light diffusing capability and all surfaces of the light conducting plate being covered with a light reflecting plate or film (column 2, lines 20-26) where the light diffusing material includes barium sulfate (column 3, lines 9-10) which can be added to the conducting layer with light diffusing areas (column 3, lines 5-10 and 32). Applicant maintains the light conducting plate disclosed by Kashima has no diffusing capability. This is not true because, as previously indicated, Figure 3(b) shows a light conducting plate (1) comprising a light diffusing

layer (3) comprising light diffusing material (6), which contains barium sulfate as disclosed in column 3, lines 1-12. Although the light conducting plate has no diffusing capability, the light diffusing plate added to the conducting plate has light diffusing capability, which is the same as indicated in instant claim 1, which reads a diffusing light layer placed on one or both surfaces of the base layer constituted by thermoplastic material containing barium sulphate. Applicant is indicating, because the diffusing light layer of the instant application is placed on one or both surfaces of the base layer of the conducting plate, the claimed conducting plate does not have diffusing ability. Examiner maintains that the conducting plate of Kashima has a diffusing light layer placed on one or both surfaces of the base layer, as claimed in instant claim 1. Applicant further argues the diffusing material of Kashima does not form a continuous film. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., diffusing material forms a continuous film) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant claims a light diffusing layer; however, does not specifically disclose whether the layer is continuous or discontinuous. Applicant argues one of skill in the art would not have drawn from Kashima et al. that an homogeneous light distribution could have been achieved by using a diffusive thermoplastic layer containing 0.01-2% by wt of barium sulphate. This argument by Applicant lacks support, by offering no evidence for this assertion. Applicant argues those skilled in the art would not have drawn from

Kashima that barium sulphate is more advantageous than the titanium oxide used by Kashima et al. The issue is not a matter of whether barium sulphate is more advantageous than titanium oxide, but that barium sulfate is a conventional equivalent and known light-diffusing material, as taught by Kashima. Applicant argues in the request for reconsideration filed on September 16, 2003, Applicants stated that the Kashima et al. light conducting plate has no diffusing capability per se. Whether having no diffusing capability per se or not, Applicant insinuated in the previous response, the light conducting plate of Kashima lacks this feature, which Examiner maintains instant claim 1 is met by the cited art. Applicant argues the technical problem to be solved by the present invention was to obtain a uniform light distribution on the surface of a composite and Kashima provides a completely different solution to the above technical problem. The solution to the instant technical problem is directed to an intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See In re Casey, 152 USPQ 235 (CCPA 1967) and In re Otto, 136 USPQ 458, 459 (CCPA 1963).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is (703) 305-9978. The examiner can normally be reached on Monday through Friday 8:30 AM – 4:30PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. Please allow the examiner twenty-four hours to return your call.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2351.

Lawrence D. Ferguson
Examiner
Art Unit 1774

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700